

CLAIMS:

What is claimed is:

1. A polishing fixture for polishing the optic ends of a fiber optic cable terminated in a fiber optic connector, comprising:

a holding plate having a receptacle for receiving the fiber optic connector with at least a portion of each of a first side and a second side of the connector exposed;

5 a clamping arm disposed for generally linear movement relative to the holding plate and the received connector as well as for pivotal movement relative to the holding plate and the received connector, the clamping arm having first and second clamping portions for engaging said first and second sides, respectively, of the connector; and

10 an actuator mechanism operatively associated with the clamping arm for moving the clamping arm generally linearly to bring the first clamping portion of the arm into clamping engagement with the first side of the connector and then pivoting the clamping arm to bring the second clamping portion of the arm into clamping engagement with the second side of the connector.

2. The polishing fixture of claim 1 wherein said holding plate is circular with a circular peripheral edge, and said receptacle is located adjacent the edge.

3. The polishing fixture of claim 2 wherein said receptacle is open at a top surface of the holding plate to expose said first side of the connector, and at least a portion of the receptacle is opening at a side thereof to expose said second side of the connector.

4. The polishing fixture of claim 3, including a plurality of said receptacles in an array angularly about the circular peripheral edge of the holding plate, in conjunction with a corresponding plurality of said clamping arms and actuator mechanisms.

5. The polishing fixture of claim 1 wherein said receptacle is located adjacent an edge of the holding plate, the receptacle being open at a top surface of the holding plate to expose said first side of the connector, and at least a portion of the receptacle is open at a side thereof to expose said second side of the connector.

6. The polishing fixture of claim 5, including a plurality of said receptacles along the peripheral edge of the holding plate, in conjunction with a corresponding plurality of said clamping arms and actuating mechanisms.

7. The polishing fixture of claim 1 wherein the first and second sides of the fiber optic connector are disposed generally perpendicular to each other, and the first and second clamping portions of said clamping arm include first and second surfaces generally perpendicular to each other.

8. The polishing fixture of claim 1 wherein said clamping arm is generally L-shaped to define first and second, mutually perpendicular legs that form the first and second clamping portions of the clamping arm.

9. The polishing fixture of claim 8 wherein said clamping arm is pivotally movable about a pivot point generally at a juncture of the perpendicular legs of the L-shaped clamping arm.

10. The polishing fixture of claim 1 wherein said actuator mechanism includes an actuating lever pivotally mounted at one end thereof to a fixed pivot on the holding plate.

11. The polishing fixture of claim 10 wherein an opposite end of said actuating lever is pivotally connected to said clamping arm.

12. The polishing fixture of claim 10, including a set screw freely rotatable in a through hole in the actuating lever and threadably engaged in a screw hole in the holding plate to move the actuating lever and effectively move the clamping arm.

13. The polishing fixture of claim 12 wherein said set screw has an enlarged, manually graspable knob to facilitate manually rotating the set screw.

14. The polishing fixture of claim 12 wherein the receptacle in said holding plate defines an insertion axis of the connector, and an axis of said screw hole is at an acute angle to said insertion axis.

15. The polishing fixture of claim 14 wherein said holding plate has a first clamping surface against which the connector is clamped by the first clamping portion of the clamping arm, the holding plate having a second clamping surface at an angle to the first clamping surface and against which said actuating lever is clamped by the set screw.

16. The polishing fixture of claim 1, wherein the fiber optic connector is a multi-fiber optic connector.

17. The polishing fixture of claim 12, wherein the set screw is configured to be rotated using a torque wrench.

18. A polishing fixture for polishing the optic ends of a fiber optic cable terminated in a fiber optic connector that has first and second sides disposed generally perpendicular to each other, comprising:

5 a holding plate having a receptacle located adjacent an edge of the plate for receiving the fiber optic connector, the receptacle being open at a top surface of the holding plate to expose said first side of the connector, and at least a portion of the receptacle being open at a side thereof to expose said second side of the connector;

10 a generally L-shaped clamping arm disposed for generally linear movement relative to the holding plate and the received connector as well as for pivotal movement relative to the holding plate and the received connector, the L-shaped clamping arm defining first and second mutually perpendicular legs that form first and second clamping portions for engaging said first and second sides, respectively, of the connector, the clamping arm being pivotally movable about a pivot point generally at a juncture of the perpendicular legs; and

15 an actuator mechanism including an actuating lever pivotally mounted at one end thereof to a fixed pivot on the holding plate, an opposite end of the actuating lever being pivotally connected to the clamping arm for moving the clamping arm generally linearly to bring the first clamping portion of the arm into clamping engagement with the first side of the connector and then pivoting the clamping arm to
20 bring the second clamping portion of the arm into clamping engagement with the second side of the connector.

19. The polishing fixture of claim 18, including a plurality of said receptacles along the peripheral edge of the holding plate, in conjunction with a corresponding plurality of said clamping arms and actuator mechanisms.

20. The polishing fixture of claim 19 wherein said holding plate is circular with a circular peripheral edge, and including a plurality of said receptacles in an array angularly about the peripheral edge of the holding plate, in conjunction with a corresponding plurality of said clamping arms and actuating levers.

21. The polishing fixture of claim 18 wherein said actuator mechanism includes a set screw freely rotatable in a through hole in the actuating lever and threadably engaged in a screw hole in the holding plate to move the actuating lever and effectively move the clamping arm.

22. The polishing fixture of claim 21 wherein said set screw has an enlarged, manually graspable knob to facilitate manually rotating the set screw.

23. The polishing fixture of claim 21 wherein the receptacle in said holding plate defines an insertion axis of the connector, and an axis of said screw hole is at an acute angle to said insertion axis.

24. The polishing fixture of claim 23 wherein said holding plate has a first clamping surface against which the connector is clamped by the first clamping portion of the clamping arm, the holding plate having a second clamping surface at an angle to the first clamping surface and against which said actuating lever is clamped by the set screw.

25. The polishing fixture of claim 21 wherein said set screw is configured to be rotated using a torque wrench.